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EXAMINER

SERRAO, RANODHI N

ART UNIT PAPER NUMBER

2141

DATE MAILED: 11/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/052,039

Applicant(s)

PARDIKAR ET AL.

Examiner

Ranodhi Serrao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 16 October 2006 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 16, 24, and 33 have been considered but are moot in view of the new ground(s) of rejection.
3. The applicant argued in substance the newly added limitations of independent claims 1, 16, and 33 and dependent claim 24. However, the new grounds teach these and the added features. See rejections below.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 15 and 32 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. A recordable computer-readable medium can be read as a carrier wave as stated in paragraph 24 of the specification.

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6. The applicant is suggested to amend the claims to read, "A recordable computer-readable **storage** medium having computer-executable instructions for performing the method of claim ..." Emphasis added.

7. When nonfunctional descriptive material is recorded on some computer-readable medium, in a computer or on an electromagnetic carrier signal, it is not statutory since no requisite functionality is present to satisfy the practical application requirement.

8. The claimed invention as a whole must be useful and accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." State Street, 149 F.3d at 1373-74, 47 USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (Brenner v. Manson, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96 (1966)); In re Fisher, 421 F.3d 1365, 76 USPQ2d 1225 (Fed. Cir. 2005); In re Ziegler, 992 F.2d 1197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993)).

Claim Objections

9. Claim 33 is objected to because of the following informalities: Line 2 reads "the method, the system comprising". Appropriate correction is required. And Line 8 reads, "an I/O manager for that manipulates..." This phrase is grammatically incorrect. Appropriate correction is required.

Claim Rejections - 35 USC § 103

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. Claims 1-11, 15-23, 25-27, and 32-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Serlet et al. (6,842,770) and Charisius et al. (2002/0078432).

12. As per claim 1, Serlet et al. teaches in a computer network, a method of automatically and transparently handling WebDAV server and file access requests (see Serlet et al., col. 5, line 60-col. 6, line 14), the method comprising: determining whether the application's request is directed to a file on a WebDAV server which is connected and operating (see Serlet et al., col. 7, lines 35-56); if so, requesting a local file system to create the file (see Serlet et al., col. 7, lines 35-56), downloading the file to a local cache of the file system (see Serlet et al., col. 9, lines 54-63); returning a file handle corresponding to the file in the local cache to the application program (see Serlet et al., col. 11, lines 24-49); and providing access to the file in the local cache of the file system via the file handle (see Serlet et al., col. 9, line 64-col. 10, line 13); and receiving a request to close the file via the file handle, and when received, uploading the file from the local cache of the file system to the WebDAV server (see Serlet et al., col. 12, lines 45-54). But fails to teach receiving at an I/O manager an I/O request initiated from an application program; if the WebDAV server is connected and operating, determining whether the specified share or file on the WebDAV server is accessible. However, Charisius et al. teaches receiving at an I/O manager an I/O request initiated from an application program (see Charisius et al., ¶ 110-112); if the WebDAV server is

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connected and operating, determining whether the specified share or file on the WebDAV server is accessible (see Charisius et al., ¶ 119). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Serlet et al. to receiving at an I/O manager an I/O request initiated from an application program; if the WebDAV server is connected and operating, determining whether the specified share or file on the WebDAV server is accessible in order to allow more than one user to view the same workflow or project plan, to provide persistent storage, to monitor the progress of an activated project plan, to simultaneously create plans from the same workflow, and to have essentially unlimited access to the power of the tool through the ubiquity of the Internet (see Charisius et al., ¶ 10).

13. As per claim 2, Serlet et al. and Charisius et al. teach receiving an I/O request initiated from an application program comprises, receiving a Universal Resource Identifier corresponding to a file on the WebDAV server (see Serlet et al., column 9, lines 38-53).

14. As per claim 3, Serlet et al. and Charisius et al. teach wherein receiving an I/O request initiated from an application program comprises, receiving a filename and an identifier previously mapped to a share on the WebDAV server (see Serlet et al., column 9, lines 54-63).

15. As per claim 4, Serlet et al. and Charisius et al. teach a method of communicating with the WebDAV server to determine whether the request can be handled, comprises, issuing an HTTP OPTIONS request, and evaluating a response

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therefrom (see Serlet et al., column 7, lines 35-56: wherein requests to create or delete a file or directory, etc. serve the function of HTTP OPTIONS request).

16. As per claim 5, Serlet et al. and Charisius et al. teach a method of communicating with the WebDAV server to determine whether the request can be handled, comprises, issuing a WebDAV PROPFIND request directed to share on the WebDAV server, and evaluating a response therefrom (see Serlet et al., column 11, lines 24-49).

17. As per claim 6, Serlet et al. and Charisius et al. teach a method wherein the WebDAV server returns property information in response to the WebDAV PROPFIND request directed to the share and further comprising, maintaining the property information in a local data structure (see Serlet et al., column 8, line 66-column 9, line 22; column 11, lines 50-65).

18. As per claim 7, Serlet et al. and Charisius et al. teach a method of communicating with the WebDAV server to determine whether the request can be handled, comprises, issuing a WebDAV PROPFIND request directed to on the WebDAV server, and evaluating a response therefrom (see Serlet et al., column 11, lines 24-49).

19. As per claim 8, Serlet et al. and Charisius et al. teach a method wherein the WebDAV server returns property information in response to the WebDAV PROPFIND request directed to the file, and further comprising, maintaining the property information in a local data structure (see Serlet et al., column 8, line 66-column 9, line 22; column 11, lines 50-65).

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20. As per claim 9, Serlet et al. and Charisius et al. teach a method wherein communicating with the WebDAV server to determine whether the request can be handled comprises: issuing an HTTP OPTIONS request, evaluating a corresponding response, and determining that the server a WebDAV server (see Serlet et al., column 6, line 25-64); issuing a WebDAV PROPFIND request directed to a share on the WebDAV server, evaluating a corresponding response, and determining that the share exists on the WebDAV server, the response including share property information; and issuing a WebDAV PROPFIND request directed to the file, evaluating a corresponding response, and determining that the file exists, the response including file property information (see Serlet et al., column 11, lines 24-49).

21. As per claim 10, Serlet et al. and Charisius et al. teach a method of maintaining the share property information and the file property information in at least one local data structure (see Serlet et al., column 8, line 66-column 9, line 22; column 11, lines 50-65).

22. As per claim 11, Serlet et al. and Charisius et al. teach a method of communicating with the WebDAV server indicates that the request can be handled, and further comprising, communicating with at least one other local component to indicate that at least this request can be handled (see Serlet et al., column 5, lines 20-52).

23. As per claim 15, Serlet et al. and Charisius et al. teach a computer-readable medium having computer-executable instructions for performing the method claim 1 (see Serlet et al., column 2, line 51-column 3, line 19).

24. As per claim 16, Serlet et al. teaches a computer-implemented method of automatically and transparently handling WebDAV server and file access requests (see

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Serlet et al., col. 5, line 60-col. 6, line 14), the method comprising: receiving at a local programming interface layer an application I/O request comprising a WebDAV Uniform Resource Identifier (URI) (see Serlet et al., col. 5, lines 20-52 and col. 7, lines 35-56); and determining at the WebDAV redirector whether a server identified via the application request comprises an available WebDAV-enabled server by obtaining capability information from the server; and if so, handling the request (see Serlet et al., col. 5, lines 20-52). But fails to teach providing the WebDAV URI to a local WebDAV redirector via an I/O manager. However, Charisius et al. teaches providing the WebDAV URI to a local WebDAV redirector via an I/O manager (see Charisius et al., ¶ 110-112). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Serlet et al. to providing the WebDAV URI to a local WebDAV redirector via an I/O manager in order to allow more than one user to view the same workflow or project plan, to provide persistent storage, to monitor the progress of an activated project plan, to simultaneously create plans from the same workflow, and to have essentially unlimited access to the power of the tool through the ubiquity of the Internet (see Charisius et al., ¶ 10).

25. As per claim 17, Serlet et al. and Charisius et al. teach the application request includes the Universal Resource Identifier (see Serlet et al., column 5, lines 20-52).

26. As per claim 18, Serlet et al. and Charisius et al. teach a method wherein the application request includes an identifier that has been previously mapped to at least part of the Universal Resource Identifier (see Serlet et al., column 9, lines 54-63).

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27. As per claim 19, Serlet et al. and Charisius et al. teach a method of providing information corresponding to the request to a local WebDAV redirector comprises polling a set of at least one redirector (see Serlet et al., col. 6, lines 25-54: wherein status information serves the function of polling).

28. As per claim 20, Serlet et al. and Charisius et al. teach a method of providing information corresponding to the request to a local WebDAV redirector comprises polling a set of at least one network provider (see Serlet et al., col. 6, lines 25-54: wherein status information serves the function of polling).

29. As per claim 21, Serlet et al. and Charisius et al. teach a method wherein the application request comprises an I/O request directed to a file, and wherein handling the request comprises creating a local file corresponding to the I/O request (see Serlet et al., column 7, lines 35-56).

30. As per claim 22, Serlet et al. and Charisius et al. teach downloading at least some file data from the WebDAV server to the local file (see Serlet et al., column 4, lines 27-53: wherein accessing information serves as downloading file data).

31. As per claim 23, Serlet et al. and Charisius et al. teach returning a file handle corresponding to the local file to the application (see Serlet et al., column 11, lines 24-49).

32. As per claim 24, Serlet et al. and Charisius et al. teach the mentioned limitations of claim 16 above, but Serlet et al. fails to teach a networking request to browse a network share on the WebDAV server, and wherein handling the request includes enumerating information of the network share. However, Charisius et al. teaches a

networking request to browse a network share on the WebDAV server, and wherein handling the request includes enumerating information of the network share (see Charisius et al., ¶132). It would have been obvious to one having ordinary skill in the art at the time of the invention to add a networking request to browse a network share on the WebDAV server, and wherein handling the request includes enumerating information of the network share in order to allow more than one user to view the same workflow or project plan, to provide persistent storage, to monitor the progress of an activated project plan, to simultaneously create plans from the same workflow, and to have essentially unlimited access to the power of the tool through the ubiquity of the Internet (see Charisius et al., ¶ 10).

33. As per claim 25, Serlet et al. and Charisius et al. teach determining at the WebDAV redirector whether the server identified via the application request comprises a WebDAV-enabled server includes, issuing an HTTP OPTIONS request to the server, and evaluating a corresponding response (see Serlet et al., column 6, line 65-column 7, line 34: wherein the request is an options request since it can be a command to write file, rename file, rename directory, etc.).

34. As per claim 26, Serlet et al. and Charisius et al. teach the application program's request indicates a share on the WebDAV server and further comprising, issuing a WebDAV PROPFIND request directed to the share on the WebDAV server (see Serlet et al., column 11, lines 24-49).

35. As per claim 27, Serlet et al. and Charisius et al. teach a method wherein the application program's request further indicates a file on the share on the WebDAV

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server, and further comprising, issuing a WebDAV PROPFIND request directed to the file (see Serlet et al., column 11, lines 24-49).

36. As per claim 32, Serlet et al. and Charisius et al. teach a computer-readable medium having computer-executable instructions for performing the method claim 16 (see Serlet et al., column 2, line 51-column 3, line 19).

37. As per claim 33, Serlet et al. teaches in a computer network, a system for automatically and transparently handling WebDAV server and file access requests (see Serlet et al., col. 5, line 6-col. 7, line 14), the system comprising, an application program that issues WebDAV-related requests including at least one request having a WebDAV Uniform Resource Identifier corresponding to a WebDAV server (see Serlet et al., column 5, lines 20-52); a WebDAV redirector, the WebDAV redirector configured to communicate with a network server to obtain capability information thereof (see Serlet et al., col. 11, lines 24-49), and to evaluate the capability information to determine whether the network server comprises the appropriate WebDAV-enabled server (see Serlet et al., col. 6, lines 25-64; wherein the response from the WebDAV/HTTP server serves the function of capability information); and when the capability information indicates that the network server is the appropriate WebDAV-enabled server, the WebDAV redirector locally handling each request corresponding to the WebDAV server that can be handled locally, and communicating with the WebDAV server to handle requests that cannot be handled locally (see Serlet et al., col. 7, lines 35-56). But fails to teach an I/O manager for that manipulates the WebDAV-related requests issued from the application program for providing to the WebDAV redirector. However, Charisius et

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al. teaches an I/O manager for that manipulates the WebDAV-related requests issued from the application program for providing to the WebDAV redirector (see Charisius et al., ¶ 110-112). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Serlet et al. to an I/O manager for that manipulates the WebDAV-related requests issued from the application program for providing to the WebDAV redirector in order to allow more than one user to view the same workflow or project plan, to provide persistent storage, to monitor the progress of an activated project plan, to simultaneously create plans from the same workflow, and to have essentially unlimited access to the power of the tool through the ubiquity of the Internet (see Charisius et al., ¶ 10).

38. As per claim 34, Serlet et al. and Charisius et al. teach a system wherein the identifier corresponding to a WebDAV server issued by the application comprises a Universal Resource Identifier (see Serlet et al., column 5, lines 20-52).

39. As per claim 35, Serlet et al. and Charisius et al. teach a system wherein the identifier corresponding to a WebDAV server issued by the application comprises an identifier previously mapped to a share on the WebDAV server (see Serlet et al., column 9, lines 54-63).

40. As per claim 38, Serlet et al. and Charisius et al. teach a system that: creates a local representation of the file (see Serlet et al., column 6, line 65-column 7, line 34); determines whether the file exists on the WebDAV server, and if so, downloads at least some of the data from the WebDAV server file to the local representation of the file (see Serlet et al., column 4, lines 27-53: wherein accessing information serves as

downloading file data); returns a file handle corresponding to the local representation of the file to the application program (see Serlet et al., column 11, lines 24-49); receives I/O read and write requests associated with the file handle and handles the I/O read and write requests via the local representation of the file (see Serlet et al., column 11, lines 24-49; column 12, lines 35-44); and receives an I/O close request associated with the file handle, and handles the I/O close request by closing the local representation of the file and uploading at least part of the local representation of the file to the WebDAV server (see Serlet et al., column 11, lines 24-49).

41. Claims 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Serlet et al. and Charisius et al. as applied to claim 33 above, and further in view of French (6,654,794).

42. As per claim 36, Serlet et al. and Charisius et al. teach the above-mentioned limitations of claim 33, but fail to teach a system wherein the WebDAV redirector receives requests from the application via an application programming interface. However, French teaches a system wherein the WebDAV redirector receives requests from the application via an application programming interface (see French, col. 4, line 66-col. 5, line 19). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Serlet et al. and Charisius et al. to a system wherein the WebDAV redirector receives requests from the application via an application programming interface in order to perform its various operations and to provide the requisite functionality of its features (see French, col. 4, line 66-col. 5, line 19).

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43. As per claim 37, Serlet et al. and Charisius et al. teach the above-mentioned limitations of claim 33, but fail to teach a system wherein the WebDAV redirector receives the I/O request from a manager component. However, French teaches a system wherein the WebDAV redirector receives the I/O request from a manager component (see French, col. 4, lines 58-65). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Serlet et al. and Charisius et al. to a system wherein the WebDAV redirector receives the I/O request from a manager component in order to perform its various operations and to provide the requisite functionality of its features (see French, col. 4, line 66-col. 5, line 19).

44. Claims 12-14, 28-30, and 39-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Serlet et al. and Charisius et al. as applied to claims 1 and 16 above, and further in view of Prust (6,714,968).

45. As per claim 12, Serlet et al. and Charisius et al. teach the mentioned limitations of claim 1 above, but fail to teach determining that the file is encrypted on the WebDAV server, and wherein downloading the file to a local cache comprises, communicating with the file system to create an image of the file in the local cache that is also encrypted. Prust teaches determining that the file is encrypted on the WebDAV server, and wherein downloading the file to a local cache comprises, communicating with the file system to create an image of the file in the local cache that is also encrypted (see Prust, column 7, lines 39-55: wherein encryption and decryption may be done either when the file is read or written). It would have been obvious to one having ordinary skill

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in the art at the time of the invention to add determining that the file is encrypted on the WebDAV server, and wherein downloading the file to a local cache comprises, communicating with the file system to create an image of the file in the local cache that is also encrypted in order to allocate a corresponding storage area for each user and store the respective user information in metadata database (see Prust, col. 7, line 59-col. 8, line 7).

46. As per claim 13, Serlet et al., Prust, and Charisius et al. teach the mentioned limitations of claims 1 and 12 above, but Serlet et al. and Charisius et al. fail to teach communicating with the file system to open the image of the file such that the file system will transparently decrypt file data on read requests and will transparently encrypt file data on write requests to the file. Prust teaches communicating with the file system to open the image of the file such that the file system will transparently decrypt file data on read requests and will transparently encrypt file data on write requests to the file (see Prust, column 7, lines 39-55: wherein encryption and decryption may be done either when the file is read or written). It would have been obvious to one having ordinary skill in the art at the time of the invention to add communicating with the file system to open the image of the file such that the file system will transparently decrypt file data on read requests and will transparently encrypt file data on write requests to the file in order to allow the user to access the respective storage area via the many access interfaces (see Prust, col. 7, line 59-col. 8, line 7).

47. As per claim 14, Serlet et al., Prust, and Charisius et al. teach the mentioned limitations of claims 1 and 12 above, but Serlet et al. and Charisius et al. fail to teach

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uploading the file from the local cache to the WebDAV server comprises, communicating with the file system to read data from the local image of the file such that the file will be uploaded as the encrypted image thereof. Prust teaches uploading the file from the local cache to the WebDAV server comprises, communicating with the file system to read data from the local image of the file such that the file will be uploaded as the encrypted image thereof (see Prust, column 7, lines 39-55: wherein encryption and decryption may be done either when the file is read or written). It would have been obvious to one having ordinary skill in the art at the time of the invention to add uploading the file from the local cache to the WebDAV server comprises, communicating with the file system to read data from the local image of the file such that the file will be uploaded as the encrypted image thereof in order to prevent unauthorized users from accessing information about other users (see Prust, column 7, lines 39-55).

48. As per claim 28, Serlet et al. and Charisius et al. teach the mentioned limitations of claim 16 above but fail to teach the application request comprises an I/O request directed to an encrypted file, and further comprising, automatically decrypting the data locally when downloading the encrypted file from the WebDAV server and automatically encrypting the data locally when uploading the encrypted file to the WebDAV server. However, Prust teaches the application request comprises an I/O request directed to an encrypted file, and further comprising, automatically decrypting the data locally when downloading the encrypted file from the WebDAV server and automatically encrypting the data locally when uploading the encrypted file to the WebDAV server (see Prust,

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column 7, lines 39-55: wherein encryption and decryption may be done either when the file is read or written). It would have been obvious to one having ordinary skill in the art at the time of the invention to add the application request comprises an I/O request directed to an encrypted file, and further comprising, automatically decrypting the data locally when downloading the encrypted file from the WebDAV server and automatically encrypting the data locally when uploading the encrypted file to the WebDAV server in order to allocate a corresponding storage area for each user and store the respective user information in metadata database (see Prust, col. 7, line 59-col. 8, line 7).

49. As per claim 29, Serlet et al. and Charisius et al. teach the mentioned limitations of claim 16 above, but fail to teach the application request comprises an I/O request directed to a file that is encrypted on the WebDAV server, and wherein handling the request comprises, creating a local file corresponding to the I/O request and downloading an image of the file on the WebDAV server to the local file, wherein the local file is written by a local system such that the image corresponds to the encrypted image on the WebDAV server. However, Prust teaches the application request comprises an I/O request directed to a file that is encrypted on the WebDAV server, and wherein handling the request comprises, creating a local file corresponding to the I/O request and downloading an image of the file on the WebDAV server to the local file, wherein the local file is written by a local system such that the image corresponds to the encrypted image on the WebDAV server (see Prust, column 7, lines 39-55: wherein encryption and decryption may be done either when the file is read or written). It would have been obvious to one having ordinary skill in the art at the time of the invention to

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add the application request comprises an I/O request directed to a file that is encrypted on the WebDAV server, and wherein handling the request comprises, creating a local file corresponding to the I/O request and downloading an image of the file on the WebDAV server to the local file, wherein the local file is written by a local system such that the image corresponds to the encrypted image on the WebDAV server in order to allow the user to access the respective storage area via the many access interfaces (see Prust, col. 7, line 59-col. 8, line 7).

50. As per claim 30, Serlet et al., Prust, and Charisius et al. teach the mentioned limitations of claims 16 and 29 above, but Serlet et al. and Charisius et al. fail to teach communicating with the file system to open the local file such that the file system will transparently decrypt file data read on read requests and will transparently encrypt file data written on write requests. Prust teaches communicating with the file system to open the local file such that the file system will transparently decrypt file data read on read requests and will transparently encrypt file data written on write requests (see Prust, column 7, lines 39-55: wherein encryption and decryption may be done either when the file is read or written). It would have been obvious to one having ordinary skill in the art at the time of the invention to add communicating with the file system to open the local file such that the file system will transparently decrypt file data read on read requests and will transparently encrypt file data written on write requests in order to store data files and communicate the data files to the storage server for storage within the storage area (see Prust, col.1, lines 49-67).

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51. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Serlet et al., Charisius et al., and Prust (6,714,968). Serlet et al., Charisius et al., and Prust teach the limitations mentioned above in claims 16, 29, and 30 but Prust and Charisius et al. fail to teach detecting a request to close the local file, closing the local file, communicating with the file system to open the local file such that the file will not be decrypted when read and uploading the file to the WebDAV server as an encrypted file. However, Serlet et al. teaches detecting a request to close the local file, closing the local file, communicating with the file system to open the local file (see Serlet et al., column 11, lines 24-49); such that the file will not be decrypted when read (see Serlet et al., column 12, lines 35-44); and uploading the file to the WebDAV server as an encrypted file (see Serlet et al., column 5, line 60-column 6, line 14: wherein authenticated access functions as being encrypted). It would have been obvious to one having ordinary skill in the art at the time of the invention to add detecting a request to close the local file, closing the local file, communicating with the file system to open the local file such that the file will not be decrypted when read and uploading the file to the WebDAV server as an encrypted file in order to allow only the authorized user to have access to his/her data on the WebDAV server (see Serlet et al., col. 6, lines 15-23).

52. As per claim 39, Serlet et al. and Charisius et al. teach the limitations mentioned above in claims 33 and 38 and furthermore teaches a system wherein requesting the file system to create a local file that is opened such that transparent encryption and decryption are not enabled therefor (see Serlet et al., column 5, line 60-column 6, line 14: wherein authenticated access may not be enabled by the user); requesting the file

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system to close the local file (see Serlet et al., column 11, lines 24-49). But fails to teach the WebDAV file is encrypted, and wherein downloading at least some of the encrypted file data by requesting the file system to write to the local file without translation thereof. Prust however teaches the WebDAV file is encrypted (see Prust, column 7, lines 39-55: wherein encryption and decryption may be done either when the file is read or written); downloading at least some of the encrypted file data by requesting the file system to write to the local file without translation thereof (see Prust, column 7, lines 7-34). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Serlet et al. to a system wherein the WebDAV file is encrypted, and that creates the local representation of the file by downloading at least some of the encrypted file data by requesting the file system to write to the local file without translation thereof in order to allow an user to access virtual storage area using a conventional electronic mail software application (see Prust, column 7, lines 7-34).

53. As per claim 40, Serlet et al., Charisius et al., and Prust teach the limitations mentioned above in claims 33, 38, and 39. Serlet et al. also teaches a system requesting the file system to reopen the local file (column 11, lines 24-49). But fails to teach reads therefrom are decrypted and writes thereto are encrypted. Prust however teaches reads therefrom are decrypted and writes thereto are encrypted (column 7, lines 39-55). It would have been obvious to one having ordinary skill in the art at the time of the invention to add reads therefrom are decrypted and writes thereto are encrypted in order to allocate a corresponding storage area for each user and store the

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respective user information in metadata database (see Prust, col. 7, line 59-col.8, line 7).

54. As per claim 41, Serlet et al., Charisius et al. and Prust teach the limitations mentioned above in claims 33, 38, 39, and 40. But Charisius et al. and Prust fail to teach when the WebDAV redirector handles the I/O close request, and before uploading the file, the WebDAV redirector closes the local representation of the file, and reopens the local file by requesting the file system to open the file such that reads therefrom are not decrypted. Serlet et al. however teaches a method of handling the I/O close request, and before uploading the file, closing the local representation of the file (see Serlet et al., column 11, lines 24-49), and reopening the local file by requesting the file system to open the file such that reads therefrom are not decrypted (see Serlet et al., column 5, line 60-column 6, line 14: wherein authenticated access function as being encrypted). It would have been obvious to one having ordinary skill in the art at the time of the invention to add a method of handling the I/O close request, and before uploading the file, closing the local representation of the file, and reopening the local file by requesting the file system to open the file such that reads therefrom are not decrypted in order for authorized users to access their data on the WebDAV server without needing to input authentication information for every transmission (see Serlet et al., col. 6, lines 15-23).

Conclusion

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ranodhi Serrao whose telephone number is (571)272-7967. The examiner can normally be reached on 8:00-4:30pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (571)272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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